

Abstract

Customized therapeutics and in situ diagnostics for patient therapy and diagnosis takes advantage of tools including techniques for derivatizing colloids with self-assembled monolayers. This provides the capability of a wide variety of assays including chemical or biochemical agent/agent interaction studies. Bio-derivatized colloids, with or without signaling entities, are used to probe interactions with species on non-colloidal structures. The invention provides techniques for immobilizing colloidal particles on a wide variety of non-colloidal structures. Included is the ability to decorate a variety of non-colloidal structures including beads, with colloids as a detectable assay. This allows, in many cases, assays detectable via the unaided human eye, as well as assays detectable via automated determination of a change of interaction of electromagnetic radiation with the colloids, e.g., absorption, light-scattering, and the like.